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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/038,661	01/08/2002	Natsuhiko Mori	100725-00068	9809

4372 7590 11/06/2002

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EXAMINER

COMPTON, ERIC B

ART UNIT	PAPER NUMBER
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3726

DATE MAILED: 11/06/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

S.M

Office Action Summary

Application No.

10/038,661

Applicant(s)

MORI ET AL.

Examiner

Eric B. Compton

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 10 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 10 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 09/504,718.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Priority

1. Applicant needs to update the specification for the claim for domestic priority to reflect the issuance of Application No. 09/504,178 as US Pat. 6,357,920.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claim 10 is rejected under 35 U.S.C. 102(b) as being anticipated by JP 10-008101 to Matsukawa et al (NIPPON KAGAKU YAKIN KK).

Matsukawa et al disclose a method for producing a sintered oil retaining bearing having a cylindrical bearing body composed of a porous body formed of a sintered metal, the method comprising; charging metal powder into a forming die; imparting a relative motion between the forming die and a forming core rod; and compacting metal powder using the forming die and the forming core rod.

In Figure 9(a), powder is first charged into the recess between the die (24) and the core rod (28). In Figure 9(b), the core rod (28) is relatively moved (raised) with respect to the die. Next in Figure 9(c) the upper (22) and lower die (30) compact the powder.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP 11-037156 to Komori et al (NTN Corp) in view of JP 09-143506 to MITSUBISHI MATERIALS ("Mitsubishi").

Komori et al disclose a method for producing a sintered oil retaining bearing having a cylindrical bearing body composed of a porous body formed of a sintered metal, the method comprising; charging metal powder into a forming die; and compacting metal powder using the forming die and the forming core rod (see Figure 1).

However, they do not disclose imparting a relative motion between the forming die and a forming core rod after the powder has been charged in the forming die.

Mitsubishi discloses a method a method for manufacturing sintered components comprising the steps of charging the raw powder (G) into the recess formed between a forming die (1), lower punch (5) and a core rod (3). The die and/or the core rod are relatively rotated in order to fill the powder in the annular space more uniformly to a higher density (Derwent Abstract).

Regarding claim 10, it would have been obvious to one having ordinary skill in the art at the time of invention, to have formed the sintered oil retaining bearing by imparting a relative motion between the forming die and a forming core rod after the

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powder has been charged in the forming die of Komori et al, in light of the teachings of Mitsubishi, in order to more uniformly space the powder to a higher density.

6. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP 11-037156 to Komori et al (NTN Corp) in view of JP 08-174292 to FUJI OOZX KK ("Fuji").

Komori et al disclose a method for producing a sintered oil retaining bearing having a cylindrical bearing body composed of a porous body formed of a sintered metal, the method comprising; charging metal powder into a forming die; and compacting metal powder using the forming die and the forming core rod (see Figure 1).

However, they do not disclose imparting a relative motion between the forming die and a forming core rod after the powder has been charged in the forming die.

Fuji discloses a method a method for manufacturing sintered components comprising the steps of charging the powder into the recess (7) formed between a die (3), bottom punch (4), upper punch (5) and a core rod (6). The rod is raised relative to the die after the powder has been charge to prevent blocking of the hole by powder while sintering (Derwent Abstract).

Regarding claim 10, it would have been obvious to one having ordinary skill in the art at the time of invention, to have formed the sintered oil retaining bearing by imparting a relative motion between the forming die and a forming core rod after the powder has been charged in the forming die of Komori et al, in light of the teachings of Fuji, in order to prevent blocking of the die hole by powder while sintering.

Prior Art References

The prior art references listed on the enclosed PTO-892, but not used in a rejection of the claims, are cited for their teachings of forming sintered oil bearings.

JP 60-077903 and JP- 077902 to HITACHI both disclose sintering processes in which the core rod is relative moved with respect to the die in order to provide for more uniform compacting of the powder.

JP 11-217601 to DAIHATSU MOTOR CO LTD discloses an identical invention as Applicant, but does not constitute prior art.

Contact Information


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric B. Compton whose telephone number is (703) 305-0240. The examiner can normally be reached on M-F, 9-5.

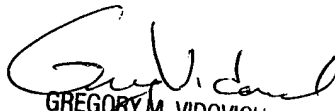
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory M. Vidovich can be reached on (703) 308-1513. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9302 for regular communications and (703) 872-9303 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1148.

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October 29, 2002


GREGORY M. VIDOVIKH
PRIMARY EXAMINER